. 10 seconds around; ask for iname, what happened of any lifethreatening bleed - 10 Se Gond - 17 survey - 2m survey & allergy - AMPLE Has last meal mediation spast Had pregnary event tenuronment - frequent repeat of My survey to catch deterioration - gastric tube to II distension present aspiration & hypotension (C.I in marillotacial #, # ball-mid ha a traumalen) 27 survey - head to to e evaluation consider cervical mouries in head 4 maxillo facial trauma so fixation is recommended

exclude corrial vessels mjung in cornal trauma, espicially it sent belt sign is present . On must be administered to all trauma patients - penetrating neck injuries can course harmatiment compression on i arway so early intubation # Larnyx (rare) hoarseness

scenphysema palpable# # Lx -, flexible endoscopic intubation or tracheostomy phrenicn, Cx324 manual inline stabilization is needed till Cx injury is excluded (from below for intubotion). difficult intubation: Ex mying, maxillobacial #, mandibular trauma, limited mouth opening, abosity, anatomical variation e-g short neck LEMON -; look externally (for characteristics of dishrulter. E; evaluate 3-3-2 rule 3 -> distance () incisors (1) at least 3 hingers

3 -> v v hyord & chin v v a v

2 -> v hyord & chin v r of the floor of fingers

mouth it least 2 tringers

M; Hallampati classification:
i hypo pharmy x should be visualized adequately. patient upright open mouth fully & protrude Ttongue, look into i mouths class I: soft palate, uvula, fauces f class II: I _ pillars class II: II - tauces classIV: hard palite only is visible O; obstruction: e-g epiglotitis, pen-tons, lar abless & trauna (haematong -) Ni neck mobility: Cx spine tixation is indicated for all blunt trauma patient · airway managment to prevent backwards displacement of it tongue so between of armay. , chin Litt: - tingers under i mandible & gently litting it upwards to bring ichin antersorly! i thumber i same hand lightly depress Tower lip to open i mouth I thumb behind i lower mason & upwords

· jaw thrust: one hand on each angle of , lower jan displacing i mandible forwards . or pharyngeal as way: using tongue depressor on - upward then rotated when resistante is met (CI in children to avoid ming) not tried in Conscious patient for tear of gay & aspiration . natopharyngeal arrway: from tip of inose to ear discontinue it there is abstruction will - CoI in # hase, maxillo facial & midhale extra-glottic & Supra-glottic devices: D Laryngeal mas & airway (2MA). not adelinitive arrway (justemporary) 2 laryngeal tube arrivey 3) multiple lumen esophageal airway. 2 lumens, 1 occlude i esophagus by aballoon & rother ventilate i traches · definitive arway = tube in straches e a cuff inflated below i vocal cords Dorodnas trached tubeshypodstory D Surgi Cal arrway [trachers to my

reasses i position of ETIE each manipulation · dye, Col met Hb . I Laccuracy of pulse oximetry · excessive patient movement & other electrical devices can cause oximetry to malfunction · needle cricothy rordatomy: - advance i Cannula 45° è suction unite tixating, i traches & thumbol fingers of 1 other hand - complications: inadequate ventilition aspiration -> hematoma -> perforation

-> preumothorax post- tracked > thyroid

-> esophaged lacoration wall mo it inadequate expiration on needle crisothyroidstory - gentle pressure on i chest te assist expiration baroid barotraums from 11 pressure - after insersion, connect it & Y connector or make side hole in 02 possiding device the allow ventilation for 1 sec mgp- 44.5 sec. exp. by Thumbon I hole or Y Connector - allow ventilation for 30-45 min only to avoid inadequate vertilation est 62

needed during 1 y survey i use of sedations succepyl choline: -dosc: 1-2 mg/kg sonset: 1 min. -duration: 5 mm. - failure of intubation is imost Common Complication So bagd mask is indicated on failure use in caution in: (for tear of 11 k) severe crushing injuries, major burns, electrical injuries, CKD, chronic paralysis, chronic neuro-muscular de · Surgical cricothypoidotomy: - transverse incision through imb, dilatorn then asmall & TT or tracheostomy tube (5-7) is inserted - not recommended for children <124 for tear of coicid injury · pulse oximetry is not accurate in sovere anemia (III) - (2.30°c), Co, protound anemia (Hb.25)

Cerresponding pc2 502 go mm Hg 120% 93/, 60 601, 30 50% · on difficult intubation; pre-oxygenate them take deep breath shold it, try intubation & Stop live ventilate when you take breath - hage mask - gastor distension - Kyle. . I've pressure ventilation may cause or 11 pneumothorax (ShoEK) * shock doesn't caused by isolated brain 1 mjuries * septic shock is rave, only it hospital arnial his been delayed for several hours + intrauma, shock is considered hemorrhysic untill proved Therwise. * early compensatory nechanisms: - 11 ctecholamines , VOC , 21 dBPs _ ITHK 61 pulse pressure

* definitive III of hemorrhagic shock: control of hemorihage + volume repletion. * vasopressors are CI for hemorrhagic shock as they worsen perhusion * 30% of blood volume could be lost before SBP * early signs of shock : 17 HR, 17 R.R. 4 pulse pressure & cold skin * Age VS HR: infant_, 160 pora school _ 140 school ___ 120 adult __ , 100 * massive blood loss may produce only minimal acide II in Hot 4 Hb. * typesof causes of shock: 1- hemorrhagic: i most common 2- Cardiagenvz: rare blust thorage trauma continsion or HI 3-tamporade: penetrating or blunt shock not responding to initial fluid therapy mulited heart sound + congested neck vains 4_ tension pneum otherway, obstructive: Congested neck veins, absent breath sounds on one side, hyperresonana & trachen deviation

5_ neurogenic: corrical or appentholacie injury - loss of sympathetic time -V.D., shock Eout tacely Cardia & no or in dBP. * fluid therapy should be tried in all shocked trauma patients * blood volume: 80-90 ml/kg in children To melky in adults * classification of hemorrhage: .. Class: 1 = donation of I unit 15% of blood volume has been lost no need for transhision - Class II: not complicated 15-30% blood Loss (750-1500ml) anxiety & UOP is mildly a lifected registalloid + transhision. . class III: 30-40% loss (1500-2000m) affect Gascidsness 118BP need transhiston · class IV: >40% loss (>2000 ml) * # tibia or humerus - up to 750ml loss # femur : up to 1500 ml 6085

* gastric distension [11 vagal time - hypotensian

* U.I for catheteraization: blood at i meatus, per ineal harmatoms, high riding mobile or not pulpable prostate Huid therapy: (include prehospital fluid) Ringer or Salme 1-2-2 for adults - 20 ml/kg for children · i total volume according to response , 17 BP by fluids while bleeding is still not controlled increase bleeding * excessive fluid can increase i lethal triad of: Coagulo pathy, acidasis, hypothermia + be aware of: blood on i floor (external blacking + 4 more (chest, pelvis (retro peritoral), abdomen & thigh) * balanced or controlled resuscitation = hypotasine resuscitation = permissive hypotension; 11 BP to i level that It perfusion & avoid rebleeding * metabolic acidosis is due to hypovolemia & shock So shouldnot be treated & Na H Co3 by modynamically Jable - 17 HP LDT R.R. - Still under resustable * hymodynamically normal = normal.

* UOP: adutt: 0.5 ml/kg/h child: In/B/h mbont: 2 ml/kg/h pneumothorax congested tympanizing haemothomy collapsed dull. * according to response to initial fluids: Il rapid responder: respond rapidly normal · hamodynamits; no further need for theid - stollow up 2) transiet responder: respond then deterrorate_ ongoing bleeding or madequate response -need transhision & control bleeding 3 minimal or no mresponder; - no response to fluid or blood, surgery

need immediate intervention of angrounds late

and defenitive management can be better. * types of blood transhison: cross matched: for ABO, Rh& other. Ab (Einst) - type specific: for ABOLRh, but not other Ab (Einbri) type o re packed o-re blood (/mmediate). * auto-transfusion: sterile collection fanti coagulation of patient blood (in case of major hemothorax) of retransfusion

massive transhision = balanced, hemostatic or damage Control resuscitation: > 10 units of packed RBCs within i 1st 24h personhage - s consumption of clotting factors hypotherminfacidos is - SO 11 2 1 crystalloids ____ dilution ~ ~ ~ Coagulopathy , inadequate volume replacement is i most Common complitation of hemorrhagit shock + undragnosed source of bleeding is i most Common Cause of pour response to their Sherapy * EVP& hemorrhage Jimitial CVP may be high even é significant blood loss e-g. COPD inadequite resucc. - minimal 11 in CVP & livids I songoing bleeding adequate resuses tation abrupt 11 in CVP for rapid resuses tation too rapid resuse. * if no response to fluid thorapy: o undiagnosed bleeding ourrelegomised fluidky - tension preunashorax - tamponade - aute gastnz dilatation Ventilation problems DKA: ineurgenit shock J.M.T

roramus, i least blood loss * pelvicit fopen book is more blood loss is vertical shear , major blood loss * temoral CVC medial to i artery (NAVEL) from both nerve antery ten empty space · antroduce i needle directed toward patients head & posterorly .. 0.5-1 mlot salune in i synnge * subclavian cvc: : Supine 150 to distand neck veins lavoid air embolis - incision: & Con below I Sundian of middle 1 medial third of clavide. · direct ineedle medially, supplementy & postenory to word i suprasternal notch. * internaljagular CVC: supme, 15° Center of 1 made by 2 heads of SM Aclande * on insersion of ove -finger in i needle to award our embolism _sterrle technique

complications of CVC: Intection - injury of i artonyon nerve A-V. Fistula air embolismi - harmothorny, preumothorny or - DVT chylothorax intra-asseous puncture. il no IV access _, IO is preferred over cre position: supine, kneed uninjured Limb 30° Plexed site antero _ medial surface of proximal train, 1 finger below tubersity . BM aspiration needle or 18 g spinal needle é stylet, go directed toward foot away from eiphys en plate them, needle 45-60 & gentle twisting motion, remove stylet, attach needle Laspirate BM · Confirmation; - Bone marrow aspiration - fluid flow easily, no swelling, no ecolymoss - needle upright é out support - through of through parotation done · Complications Sc or subsperio steal inditration physeal plate in - Intection

* peluc #; - pelvicecchymosis, pennentor scrotal haunstony - legs L'asymmetric rotation - rectal exam: , sostate, # blood in 8700)
- vagnal exam; #, uterus, blood in 8700) : - push & pull legs: - gently ant. - post. Compression+ lateral to medial Compression on ASIS for click, - X-ray: - width of symphysis pubs (>1cm injury) - sup. 4 int. public rami = a cetabulum - head neck of tomus - ilium Asacro Macjount to 11 bleeding: - avoid excessivel repeated manipulation - Internal rotation of lower legis 4 the 1. notated legs together - binder or sheet - sand bags under each buttock it no IF spine desther techniques not available - or the ansultation - embolize inessels via anglography

yenous Cut down: full thickness, transverse skin incision(254)

Assection to Identify i veins elevate it to about 2 cm. ligate i distal mobilized vern leaving surves in place for traction til around i vein in caphaled direction -small, transverse veritory agently dilated - Cannula through verrotomy & ligate it Chest trauma * hyporia is due to: - It blood where e-g haemothorax - verti lation/ pertusion mis match en contusion - change in intra thoracic pressure eg promoty * displaced sterno-clavicular joint can cause allway obstruction & it is managed by reduction of clavicle by extending shoulders * hypovolemiz shock + distended neck wahes Consider tens, on preumothorax, andial tamponade, diaphragmatic njunge M-I

* tension preumothorax (Din 17 survey) shift of mediastinum - distended neck veins - hyperresonance note. - enlarged hem Tho rage e no movement ... Il V.R (due to 11 intrashoracie pressure) - JI Cop shock Cobstructive) · Cause : + ve pressure ventilation è Visceral pleural injury, simple preumstay CVC insertion . It shouldn't be delayed to wait for radiological Confirmation.

tt: needle thoracotomy (temporary)

- intercestal Chest tube * open preumothorax: (sucking chestwould) . Din 1y Survey - air flowerst i direction à lower pressure · initial management: sterite occhisive dressing over; whole wound taped on 3 sides, leaving; 4th to provide a flutter type valve, so o'n inspiration, ve pressure sucks i dressing - no av entry & on expiration

air flower ant definitive the ICI then wound closure flail chest: (Din 1my survey) 2 or more pibs # at 2 or more lines disruption of normal chest wall movement, paradoxi cul motron restricted movement due to pain funderlying lung Contusion (it present) - hypoxia H: analgesia: IV, locator intra-pleural * massive hemothorax: (Din 13 survey) . >1500 ml blood in pleural Cavity · Caused by penetrating (more) or blustinging
- It are entry - dull ness - Flat neck veins - mediastinal shift (rare) -H' resuscitation by blood & crystallioids - chest tube * Indications of thoracotomy? 2-11 / 500 ml but 5/11 blocking S- Continues blood loss; 200 mil/h for 2.4h 4- persistent need for blood transhistan

pneumothorax haemothorax duliness hyper resonance mediast mel shift no shift of mediation flat neck veins distended neck van * obstructive neck with shock + Flat neck verns _ bleeding * penetrating wounds medial to repplet medial to scapula may mjure great vessely, heart & pen Cardum, so theracotomy may be needed * cardiac tamponade: - penetrating (more) on bluntinjuries smill amount of blood can restrict i cardiac activity. D: Beck's I w may not be complete in trauma. · Kassmanl's sign: 11 in venous pressure (distended neck veins) è inspiration . D: -Beckis A - Eccho - 17 CVP (may be low dt hal or II dt other causes)

FAST (90-95%, accuracy) management: penicardid centesis (temporary)

thoracotomy -> penicardio tomy > rspirata I blood, repair mjury & examine sheart patients à a cute tamponade + ve pericardiocentes is needs surgery resuscitative thoractomy. closed heart massage for cardial arrest or PEA in patients e hyporotemia (in trauma): is in effective - intubation, qualified surgeon, surgery: · Control of bleeding - opin Cardiac massage - rarely effective portrating injury, no cardiac activity no signs of life - no CPR haemothoras: (Din 2ry survey) -dt paretinting (17) on blint - < 1500 ml Tet is large enough to appear in Cik, -That fully evaluated - dot on empyerra

* simple preumothorax: (Din 2'y survey) - due to ponetrating or blumt trauma - chest tube or monitoring of follow up so no general anasthesis nor +ve pressure ventilation untill a chest tube has been inserted may progress to tension preumothorax * pulmonary contustar; (Din 2" survey) - I most common potentially lethal chest mying - con occur & or & out # ribs respicially in children - Mpoxia (Poz 265) or Soz 290%) needs intubation & ventilation & in 5 15t hour after mying - if COPD, pulmonary de or CKD - ntubete before transfere (it will be transferred) * tracheo branchial tree mjury: Din 2ry survey - haemoptysis, S.C. emphysema, tension preum thom - rare but fatal - needs surgery suggests traches bronchoal tree mying

blunt Cardia (Myny: () in 2 my survey)

* Can Cause myo cardial contusion, chamber

repure, commany artery dissection or thrombosis, - causes hypotension, dys thy thomin I wall motion abnormalities on eccho multiple PVCs, unexplained sinus tacetycardia, A.F. BBB(usually rt) of S.T changes are I most Common changes - Eca changes _, 24h monstoring - no ECG changes _ no monitoring * traumatic aortic disription; (in 27 survey) - latal except i l'intimal tear - wide mediastinum _ obliteration objetits - deviation of itrachea to I right - It hemothors -# of 1st, 2nd nb or · C.T. C. Tanging saphy of Scapula trans-esophageal echo needs surgical repair or resections replacement é interposition graft

* traumatic diaphragmatic injury; (in 2") survey
- Common in It side as i Liver protects i right side - blunt trauma - radial tears - hernintion - penetrating trauma - small perforation years for herniation - clevited diaphragm (may normally reaches ith - acute gastric dilutation - Loculated harmo pneumothorax - stomach, Colon on Ryle in i chest - gastric juice or food particles in ICI - elevated diaphragm is i'only sign of injured right side on suspiscion; Ryle - 17 CXR Confirm it in i thomax _, C.T + contrast studies . Ht; surgical repair * blunt exophageal repture: (In 27 survey)
. due to penetrating (more) or blunt trauma to upper abdomen - ejection of gastric copen in i esophagur _ linear tear -> Leakage, medias tim tis · Considered m:

ont # ribse recieved severe blow to i lower sternum or epigastrium shock out of proportion to apparent injurys
has particulate matter in ICT after blood begins to clear _mediastmal air D: Contrast studies + esophagoscopy H; surgical drainaged repair *ribs, sternum & Scapular #; (in 2 my survey) i upper 3 ribs are protected by fram work of i upper limb (scapula, humerus, clavidet their musculature). ·# 1st, 2 ndribg sternum & scapula suggest severe trauma & complications e- pulminary contusions & blunt caroline injury · 4-9 ribs are i most affected: - # at midshaft - cause haemo or preumothorax - it in young age -> severe from of # Loth 12th ribs -> 11 suspiscion of hin + hepato-splenic injury

· lo Calized pain, tenderness, 4 chick . # rib in old age should be respected as incidence of pneumothorax & mortality is doubled · analgesia , î name X CXR: (A) over view, suspected pathology

focus according to clinical B) tracheal bronchus position of ETT

saw leakage preumo mediastrum

preumopen tonium

interstitud air [C] pleurallung, haemothorag To preumothorax (apical lucent area Eout boonchoruscular marking) La consolidation (Continsion or harmatom) [D] mediastinum, air, enlarged cardine shadow La wide mediastinum sobliteration of aertic knob La tracheal deviation El diap magn , elevated, irregular , mediastinal shift , mass like density above it (bowel omentum, liver, spleen, kidney) eg localited pneumother

+ clavide, scapula El bone sternum sternvelancular joint Gl soft tissue, tuber, lines, X-ray reassesments. * chest tube insertion: at i Level of inipple; 5th interestal space just anterior to mid-axillary line sterilization - anasthesia _2-3 Cm transverse incission & blunt dissection of SC tissues just over itop of inib - puncture i parietal pleura e itip ofaclamp i and clear adhesions by finger - clamp i proximal end of thoracostomy tubes advance it into i plearals pace directed Posteriorly. - Contirmed by seeing a listening air movement - tixations suture in place - under water seal apparatus - occlusive dressing - CXRA ABG or pulse eximetry · ICT size: 32-40 French · Causes of persistent preumothorax: - Leaky under nater -large 1ry leak

oranchus, branchoscopy * peri Cardio Centesis: - vital signs & ECG befores during & after stentization of xiphoid & sub xiphoid area - local anathesia - needle, catheter (16-18 gauge, 15 cm), 35 ml empty synng & 3 - way stop Gck - puneture iskin 1-2 cm interior to i left of xiphochondral junction at a 45° angle - directed to i tip of It scapula, advance i needle observing ECG, if reached i ventricle sextreme SIT- T changest PVCs + widened, enlarged QRS so withdraw i needle till these changes subsided baseline 6 CG reappears - aspirate as much non clotted blood as possible_ it reached i ventrale again, withdraw i - after aspiration, connect istop cock & leave i Catheter in place as it may be needed

again before definitive # complications: aspiration of ventricular blood injury of mys Cardium or epicardium - injury of Coronary arteries or veins - ventricular tibrillation - preumothorax 27 to lung injury - injury of esophagus or peritonium injury of great vessels * Wearing: is > - haemodynamically stable · Cause of ventilation is corrected - GCS >8 -AISG = accepted - K.R. : 8 pressure support : 8 11 PS before R.R. - CPAP (pressure support) before wearing EPS 15 15 8 4 R.K. 2,30 * SIMV (synchrom zed intermettant mandatory ventilation e[VC] or PC + pressure Troggus

Vit insp should be equal to by exp. & I high difference - search for lak. Tracoum: [25 mg] 450 mg amp. atracurium; nondepolarium neuro mus Cular blocker . 0.005 - 0-01 mg/kg/min roughly: 25 mg loading them: 200 mg in 50 ml at arate of 6-12 ml/h * mantinance of mannitul: 250 - 500 mg /kg /6h 1.e. 100 and 16h Abdoment Pelvis). * assessed & circulation in 1 y survey for possibility of haemorrhage, Significant blood loss may be present Fort dramatic changes in appearances signs of peritoneal irritation

* antenor abdomen: Costal margins superiorly, inquital ligaments of symphysis pulots intersorly & anterior axillary lines lateral. * Thora 6 - abdomen: thereto-area () trans-nipple line 4 intrascapular lines Costal margins * diaphragm rises to 4th IC space during tull expiration * any # ribs on penetrating wound below nipples Can nivere thorato-abdomin viscera eg livar, spleen 4 stomach * Hank: area () contenon + postenon exillary lines from 6th IC space to ilix crests, i good musculature of this region protects viscera partially * i back: area posterior to posterior axillary lines, from tips I scapula to ihac crests, i good musculature partially protects x retro-pentoneal organs bocated in stlank I hack are abdominal astra, IVC, most of Luedenum, panorers, kidney, wreters,

postenor aspects of ascending 4 descending colong retroperitoneal Components of pelvic arity of retroperitoneal injury is not diagnosed by FAST nor. DPL nor. DPL deceleration Causes injuryet la ceration of mornable organs at their fixed parts by logon improperty tied restrain device up seat belf sign (6 tusion at site of belt) raise suspission of internal injury. * possibility of major visceral njuries & gunshot II > 3 meters * signs of pelvic # - rupture wrethra eng high riding postate, scrotal halmatoman blood at i meatus - Limb length discrepanty - votation al deformity of Limb Eout abridus # * manual manipulation of pelvis shouldbe once & should be avoided in putionts & shock or obvious # pelvis as it may dishage cots 477 hainstrhage *unstable hemi pelvis migrates apwards because of musculat forces & rotates outwards 2 mg to
effect of gravita

* avoid Catheteraization in suspected wrethral * penetrating syuries to gluteal region (from strac crests to gluteal folds) are associated è up to 50%. incidence of intra abdomina injuries.

* gross hematuria is asign of trauma to. genitourinary tract & non renal intra-abdown organs - Consider wrethral mjung in:
- mability to void - unstable # pelvis -, blood at i meetus - scrotal haemitons - perinent eccly mosts - high riding prostate => wrethrogram is indicated in these ases before catheteraization * ionly CI to joursorm FASTADPL is an existing indication of laparotomy * awake patrent fout pain on tenderness dues not need applied x-ray * stable patient & guns hot or pond rating

* FAST; to CCussed assesment somegraphy in trauma o pentardial sac two pentardial window. Subxiphoid & parasternal @ hepato-renal tossa 3 spleno-rend tossa @ pelvis or Douglas pouch aur * 2m scan & FASI can be performed after an softerval of 30 min. * accuracy of FAST II E: obesity, SC airq previous abdominal operations + DPL; diagnostic peritoneal Larage, relatively CIn: morbid obesity, provide abdominal surgory, advanced circhasis & pre-existing coagulopathy * C.Tabdomen should be used only in hemodynamically normal patient ero apparant ndication for laparotemy * relative C.I for C.T: delay (for any reson) in cooperative patient *In i absence of hepatic or splonix injuries,
i presence of f.f. in i abdomon suggests an injury
to GITO to GIT & many trauma surgeons find this an indication

for early intervention. * wrethrogram: 8 French wrinary Catheter in mental tossay secured by ballon inflation to 1.5-2 ml them 30 = 35 ml at undiluted Contrast is instilled, adequate study it contrast reflex normally into i bladdor * rupture bladder is diagnosed by gystogram or C.T. cystography * on retro-peritoneal mirries: C. J & contrast, apport lower GIT soontings studies of panereation billiary imaging studies are useful. * disadvantages of FAST - operator dependent - disrupted by scar = missed diaphragmatic & retro portoner Myunas 2 . 11/21/3 * disadvantages of DPL: as FASI+ INVASIVE * disadvantages of C.T: - needs transport _ Cost4 time consuming - missed diaphrag matic, bowd & some panereste miles

* inditations of laparotomy in penetrating abdominal wounds: bemody namic un stability gun shot é trans perstonent trajetory (most gun shot saire managed by laparotomy) (aparotomy) a signs of peritoneal irritation - signs of fascial penetration * indications of laparottomy: is above + sainte - blunt trauma è hypotension à + ve F-AST or clinical evidence of intraperitoreal bleeding - peritonitis - free air, retropentone arpr rupture of hemi diaphragm ro C-T - rupture GIT I intra per toner bladder rupture, renal pedicle mying & severe porenchy malinjung * larly normal sa amylase not exclude suncreation
* persistent elevated or vising s. amylase suspect pancrentic injury *C.T & Contrast (double contrast) may be normal up to 8h from pancreatic injury.

* 95% of renal injuries does not need surgery injury to Liver, spleen or kidney causing instability or evidence of Continuing bleeding need urgent Laparotomy * Solid organ injury + hemodynamic stable Can be managed Conservatively. * hypotension + pelvic # - , high mortility * pelvic # + hemorrhage - Commonly. disruption of posterior osseous ligamentons. (Saltoiliac, sacrospinous, sacrotuberons f Fibromuscular petric floor * FFH > 3.6 meters can cause pelvic ring injuries * # pelvis @ AP Compression - opening of pelvic. ring i. e open book - hemorrhage @ Lateral Compression - internal ostation -It pelvic volume -, It hemorrhage 3 vortical shear auses major instability (1) Complex pattern - combination Signed De 1821 Bush Charles - 19 12 Bush

management; stabilization to longitudenal traction to - internal ratation sheet or peluc binder at ilevel of greater trochanters of femur pelvic binder is atom porary method 47/ delimitive Ht, its pressure is enough to cause ulceration of pressure necrosis * DPL is performed by surgeon. sterilization, anasthesia, incision (or closed) below i umbilitus of suprapubits insert synng or atheter of aspirate. it blood - Laparstomy, it - Ve - 100 ml Saline askake i patient aspirates It blood, vegetables, biles or food particles leparatorny * FA STANDER & ANDREW AT WARREN Le pers Cardral view at sieprgastron 2 rt upper quadront view to include diaphragm, Liver & Horrison's pouch disphragm, spleen & splean-kidney

· performed by alow frequenty (3.5 M 12) transchiler; I curved array transchiler or i phased array condiae transducer · higher frequency transducers for children or extremely thin adults · Lower trequency transducers for morbidly to ensure that i gain is set appropriate A search for pentardial effusion ane at 10th of 11 spale . LUQ _ sagittal view in i midaxillary line at i8th or 9th space ; it is i most difficult view because of air from Stomach& Colon so it may be necessary to move i transducer posteriorly · supra pubit view _s transverse view, it tre fluid _ side to side movement of itransducer, , it it disappeared so it was artitact per formed before atheteraization as distended bladder is helpful in secing

peurstour, stotoxIZ & nephrotoxIZ:
oclier é renil impairement, high closes f prolonged use avoid potend deureties en furosemide; 11 stato xitity (Musculos keletal). # in My survey: Control hge from obvious wound on # * immobilization: It blood loss, to paint prevent further soft tissue mjung + any open wound to alomb E an associated. # is considered open # untill proved otherwise by asurgeon movement of an extremity may be i only sign

of impaired function. * doppler wave must be triphasic to ensure no proximal Lesson * stock 4 glove hypothesia is an early sign of vascular impairement

dislocation elbow postolecranon prominent post. flexion, abduction lext rotate flexion, adductions int: " 1008t-Loss of Contourf extension knee : external rotation of promuhent Catoral medial malleolus * i only reason to electing not to obtain X-ray prior to treatment of distation or # 1.5 i presence of vascular Compromis or imponding skin breakdown * like threatening extremity mjuries are: major arterial lige & crush syndrome & loss of pulse, I holume, II doppler tong cold & paile extremity , arterial mying * rapidly expanding haematoma suggests asignificant vascular injury of muscular trauma 15 1 most Common Course of rhandomiolysis myny, ms ischemia & cell death of asignificat ms mass as thigh or Call.

* in Crush Syndrome: donk urines haemoglobinuria, ± 11 k, + 11 G, # metabolic acidosis *DIC the IV Phids to maintain COP of ins doesn't tolerate alack of arterial bload flow for longer than 6h before necrosis begins: * Compartmental syndrome is due to 11 pressure è in ostestacial Compartment leading to ischemial necrosis e-9 11 volume inside on Compression from - occur in any closed facial space eg torearm, hand, thigh, gluteal regions leg & foot * paralysist absence of pulse are lite Andrings in compartmental syndrome # Signs & symptoms of Comparatmental syndrome: · tense compartment aftered sensation asymmetry of ims compantments of pain > expected Low- proportion De pain on passive stretchelia muscles

Limitable - Jacob Hall School Residence - 1 - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2	DO D		
verve	motor	50n8ory	- my'uny
Dainer & median	nedial la higa thener contrat	as motor	# elbow twist # dordiska.
	Eopposition of hinge	Tront of 6	distal & humerus of
1 4 2 3 3	19 12 1 130	Lateral shoulder	ant shoulder dislocation
	knee extension		autishoulder dislocation public rami
10 apturator	hip adduction	medial think	obtinator ma
& scientic.	plantar dorst	foot	Ence disbation post hip disbate
*#	Cortex.	in i sotin	uity of I bone
* Knee immobolization should be at 10° Plexon to II tension			
Contomitant ipsilateral leg #			
		7-10e	a constant

traction splint (? Thomas):

* longth: according to i uninjured Limb:

i ring under; buttocks tackjacent to

i isched tuberasity & idistal end 15 cm beyond rankle traction distally & rotation to restore ianatomical position , asses neuro vascular beforefatter reductions Fixation - splint one joint before & one joint after it * Kimnetaride 300 mg, tab. (150minudet ritampion) * P.1. B 500 mg tub. (pyrazinamide) * ETIBI 500 mg tab. (ethambutol). 4 drugs for 2m then stop pyrazihamidet Continue INH fritampian toranther 4m laily resi 7 for active T.B: · daily regimen if not observed of twife per week it under direct observation therapy (Dol) · mostor LFT, scr 4 CBC

* Ritampin. 10 mg/kg/d or twice fw (DOT) not more than 600 mgld 11 Liver enzymes + use to canton in DM * I Somaride (INH) 5 mg/kg/d not more than 300 mg/d 15 mg/kg 1-3/w not more than 900 mg/da * 6 tham butst 15 mg/kg/d. follow visual acuity & red green along perception test * Pyrazinamide: 15-30 mg/kg/d, not > 2gld or 50 mg/kg twite/w, not > 2gldose 11 unc acid * racium (atracirium); - mon depolarizing ms relaxant - landing: 0-4-0-5 mg/bg -, maintinance: 0.005-0.01 mg/kg/min - amp. 25 mg 4 50 mg

Tamiflu 4 Taminil (osettamivir): 75 mg tab. .1x2 x5 for +H 1x1x10, for prophylaxis renal modification.

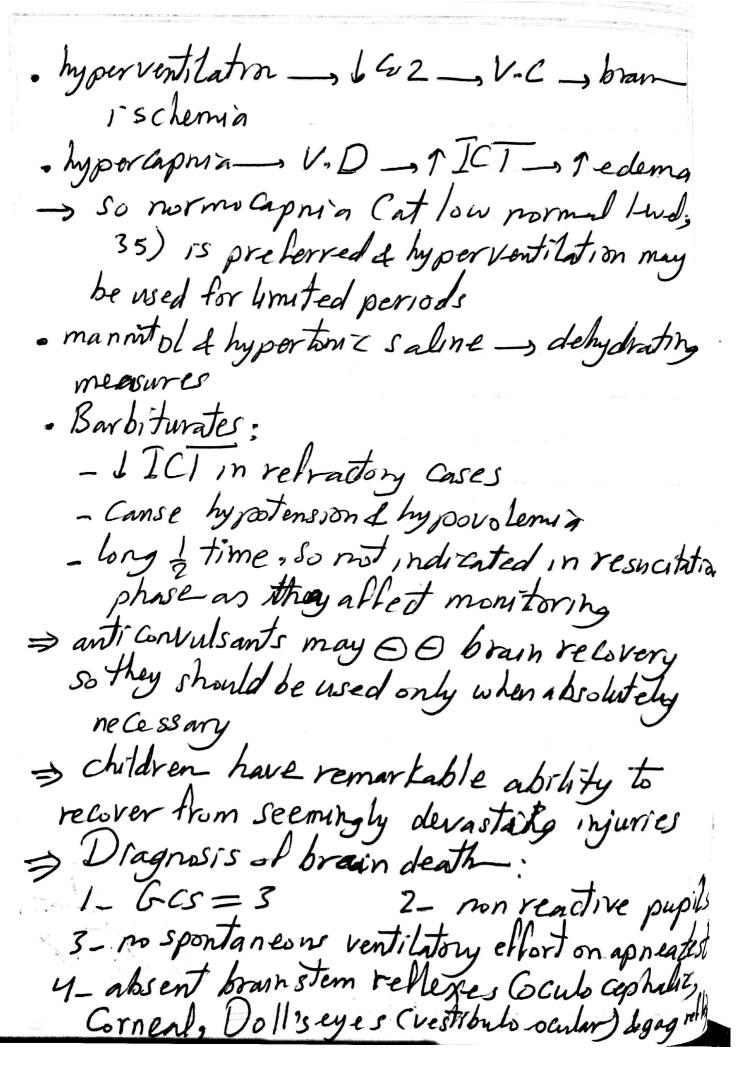
excl: 10-30: 1x 1x5 for HH (Head trauma) . hase from iscalp can cause shock&death! meningent arteries lie (), durasi innu surface of i skull (epidural space), so Licerations _ EDH & imost Commonly Mymed a. is middle meningeal a. w lie over i temporal fossa · Skull + & dural sinuses injury can constant ispace co dwal subarachinoid is i subdural space in whee can occur dt njury of transverse vessels a bridge from brown into daralsimises · Subarachinoid space is Alled & CSF · lalx cerebri separates i 2 hemisphores

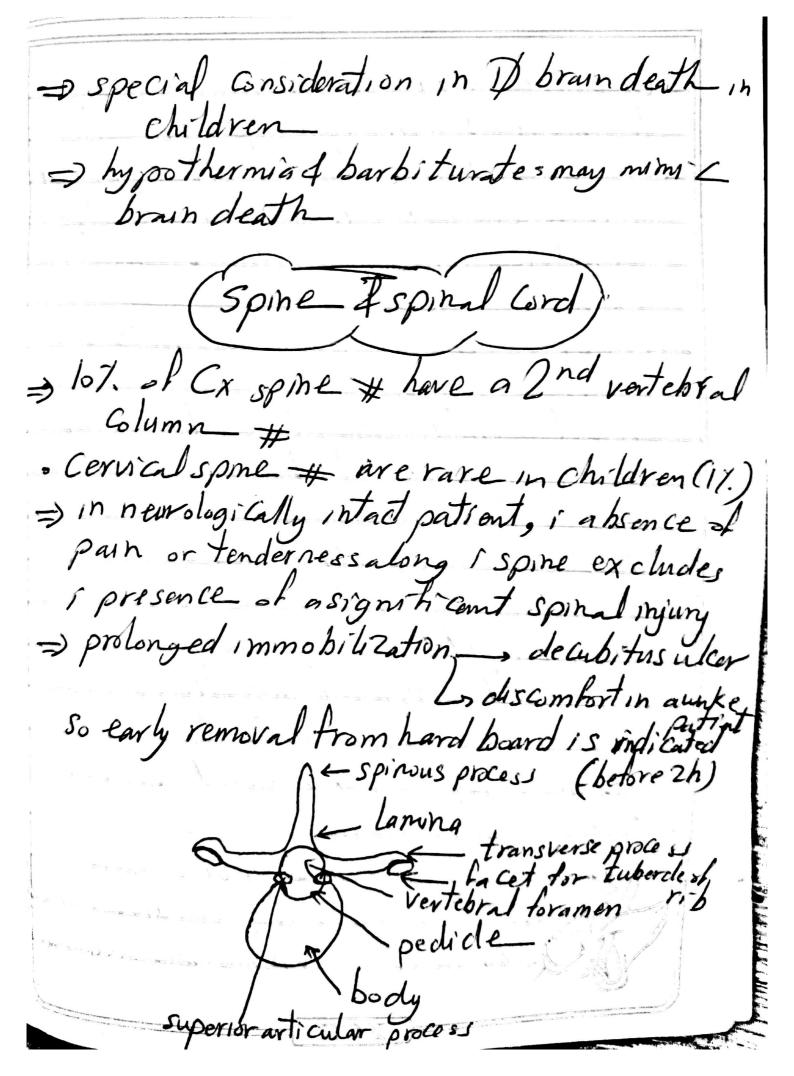
· reticular activating system w is responsible for alertness lie in midbrain supperpon . Frontal lobe _ executive function, emotions, motor functions & expression of speech · parietal lobe, sensation & spatial orientation . temporal lobe, certain motor functions · occipital lobe vision · blood in i ventrides - impaires CSF absorption Asolt 1CT - tentorium Cerebelli divides ; intracranil Cavity into supratenterval & infratentomal Compartments. i midbrain passes through an opening Called stentorral hintus or notch occulomotor n. passes along i edge of i tentorium L may become compressed against It during temporal labe herniation causing pupillary de Lateron dt i un opposed sympothetic acitivity (called blown pup) uncal hermition is hernintron of i medial part of temporal labe (cincus) through , tentonial notch Cansing ipsilateral pupitary delotations

ICT = lo monthy, -1 > 20 - poor outcome on 11 ICT, CSf & venous blood are compressed. to sustain normal ICT but at certain limit sudder 11 in ICI occurs cerebral pertusion pressure = mean AISP_ . 102, 1 Co2, 1 Co2 4 & BP can affect ICIA cerebral perhasion by affecting blood vessels to mountain cerebral perhasion & ICT + monor brain itging: GCS:-13-15 moderate 11 a: GCS: 9-12 Severe 11 11: GCS: 3-8 (Coma) sparalysis of # base (hearing) · diffuse axonal injury (shearing injuries) appears as border () grey famile matter (w represent punctate has) · EDH: lucid interval () time of injungt neurological deterioration ·SOH is associated & more brain injury than EDA

· Contusion (Common in Frontal Ltemporal libes) may become harmatoma or canse miss effect so Pollow up CoT after 24h is recomme - mor brain injury:
- GCS: 13-15 - amnesia
- transient loss of Consciousness = indications of C.T in minor 1 BI: high risk pl- GCS < 15 at 2h after injury for 2- suspected open or depressed # neurosugical 3- Signs of # base intervention4 - vomiting > 2 times moderate 6- loss of Conscionsness>5 min for braining 8 - dangerous mechanism - severe headache, tocal news logical defects no reliable observer at home are indications for admission . on discharge: warning sheet is explained to patient & relative & Follow up is highly inducated =) only paracetamof is indicated in i 1st 24 h after TBI (no ASAIDS)

warning Signs (Come back to hospital). drowsinessor difficulty in awakely patient 2 nanses or vomiting 3-Pits 4. bleeding or watery drainage from moder 5 severe headache 6- weakness or anasthesia in iarmorles 7. pupil > i other or visual disturbances 8- confusion or strange behavior g very slow or very rapid pulse 10- unusual breathing pattern
insevere 1 BI:
-ABC 1st _S02>98/ =) ICH doesn't cause heppovolemicshock =) hypotension is not due to IBI except in terminal stages - neurological examination: Ges, pupillary light response + facal delicits motor response by pinching i trapezins, rail bedor supra orbital pressure even patients & apparantly devisiting 18 I on presentation may have significant neuroligic recovery





- Cx spine is i most vulnerable to injury because of its mobility 4 exposure -> #, dorsal spine is rare dt support of strong cage but when occur-swedge ## compelete and mying occurs belansest namen Thoraci C Canal . 15% of spinal injuries occurs in thoralo-Lumbar region - spinal Cord begins at candal end of medulla oblongata at i foramin magnisf ends at Li as i comus medullaries & below This level -s canda equina. . incompeter cordinjung has better prognosis Than competete · preserved perianal sensations or voluntary control of rectal sphinter (sacral spiny) may be sonly sign of residual function -s Cortico_spinal trad: -in i posterolatoral part of i cord - controls motor power of isameside of ibody - tested by voluntary or involuntary ms antition

- spinothalamic trait: - in i anterstatent aspect of i Gord transmits paint temp. sensation from i oppositeside - tested by pinprick & light touch - dorsal Columns (fasciculus gracitist E. cunety) in i postero medial aspect - transmits positions vibration & some light touch sensation from i same side - tested by position sense in toes & lingers or vibration sense using tuning fork . Sensory Level 15 i lowest dermatome à normal sensation & Can differ on i 2 sides · CI - Cy are variable in their cutameous distribution so not commonly used for licalization - dermatomes: - C2-Cy -s supraclavicular region Labove petralis - C6 - thumb - C7 - middle hinger - C8 - Little - Ty-nipple -18 - Xiphisternum - Tio-, umbilitus -112 - Symphysis pubis - Lyalo - Lyalos - medial dlateral port of ileg Sind teral out filed - 5425-> perianal region

-> neurogeniz shock: - impairement of i descending sympathetic pathway in Cx & upper thoracic segments (down to 16) _, loss of Vaso motor time b sympathetic innervation to i heart VDf brady Cardia - shock - volume replacement (if hge), vasopres sors, atropine it significant II HR - spinal shock - flaculaty & loss of reflexes after sponal ron functioning although it may be not destroyed - duration is variable . phrenic n. (C3-C5) ____ diaphragm -, lesions above II -, quadriplegia. -, lesions below TII - paraplegia - all patients & radiclogical evidence of njury de neurological deficit should be considered to have an unstable injuny untill proved otherwise

muscle strength grading: O paralysis 1 - pulpable or visible contraction 2 ____ full range of movement & gravity 3 - 1 N N a against gravity 4-1000 but less than normal strength 5 - normal strength central Gord Syndrome: - loss of power more at apper than lower extremities - dt hyperextension in a pre-existing Cervical Canalstenssis anterior cord syndrome: - paraplegia floss of pains temp . Sonsation & preservation of dersal column tunction - dt intarctionol i Cord, has bad prognosis + Brown Seguard syndrome: e contralateral loss of power of position sonse 1-2 Level below trauma. - dt ponetrating injuries

* Canses of Cx #: - Flexion textension Literal bending - axial bading - distraction - atlanto-occipital distocation com conse apread brain stem destruction & its a Canse of death in shakon baby syndrom . 40% of atlas(G) # is associated E axis (G2)# -> burst (Tefferson) # 15 imost Common - Cx 1 # ; chisruption of both i anternord posterson rings of Cx) e lateral displacent of ; lateral, masses - dt axial bading; heavy object on i head or landing & i head - best assesed in open month view of Cr14422 daxial C.T · 1 axis is i largest cerural vertebral i most unusual in shape. - AXI'S #s:

odentoid #: - peg shaped protuberance projects upwards fin Contact & i anterior arch of GI - D by lateral view, open mouth odortord view or C.T - # of tip (un common) & base of dense (comma)
- posterior element #: - Hangman's # involves i postenor elements of Cx 2; i pars interarticularis · # of G3 is un Common - i greatest lexion dextension of cernal spre occurs at C5& G So C5 is I most commonly fractured & i most comme Sublaxation is Coon Co *Thoracic spine #: anterior wedge Compression injuries - burst injuries - Chance # - # disto Controns · wedge # 15 dt axial, bading & Mexion, 25%, shorter than i posterior body ditis mostly stable

. burst # by ventical exial Compression schance # are transverse # through I body, Common in MCA in wi patient was restrained by only alap belt, may be associated a retroperitoneal sviscent · simple Compression #_ stuble & ## ē arigid brace = chance # &# distocation are unstables almost require internal fixation - At hyperflexion of rotation (TII-LI)#: - unstable - Cause bladder & bowel distunction & 11 powers sensation in Lower oxtremities * Lumber # : as Thoracic but & much lower neurologiand deficats - suspect carotidd vertebral vascular injuries in: CI-C3 # & Crspine # & sublaxit extrauma E: par , tenderness deliate, Il ans your level & significant mechanism

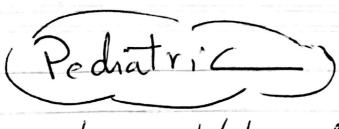
. tilms: (sterne) AP & open mouth odontoid = base of skull, all 7 aspinedi 1st thorage vertebra must be visculized on i lateral view - neck pain + normal films (x-ray & Cil)needs MRI or neck collar (semi-ngidorsaft) for 2-3 is their reassesment => on immobilization. torticollusis or patiente deformities should not be forced to newtral positions Should be immobilized at position of confort => semi-rigid Collar doesnot ensure compelete stabilization, so: servirigid neck Collar, head mm bilization, back board, tape of straps are indicated. · paraplegia or quadreplegia is an evidence of spinal instability => patients who are awake, alert, sober, neurologically normal, no neck pain, no modure tenderness or a distracting injury are extremely unlikely to have Crispine # or instability so remove collar, pulpited ask i patient to voluntary move i neck, if no pain nor tenderness nor limitation of

movement _ X-ray rs not recessory -i-l'in doupt leave, collar at place - all films should be or good quality of interpreted adequately ant-spinal line

post. spinal line -> Cx X ray: Spirous processes -son immobilization! - Consider padding under j patients head to avoid hyperextension of i neck of for Contort - place padding, rolled blankets on both sides of patients head kneck & firmly secure , head to i board. son immobilizing child. - pediatric board is preferred fil not available, use adult board 1: padding & Mankets on both sides to prevent lateral movement predding below shoulders to elevate I torso & prevent hyper flexion of Cx spine of the larger size of child head (espicially i occipit).

* Child Iro - Pugh score (CIP): points 1 1-encephalopathy 2-asatis grade1-2 grade 3-4 mild > moderate >3 2-3 3- bilirubin < 2 <28 28-35 >3-5 4-albumin >6sec 4-6 sec 5 -P.T (seconds pro larged) <4 see 1.7-2.3 >23 <1-7 or INR - Child class A: 5-6 points B: 7-9, soint. B: 7-9,00ints C: 10-15,00ints prognostic tool & g class C - 50%.
mortality within 1 y. * Glypressin (terlipressin)

Inglamp-



* aprila, hypoventilation & hypoxia are

5 times more common than hypotension
hypovolensia due to blund trauma to brance

* supra chondylar # in children (elbouf

Knic) have high risk for vascular &

growth plate injury.

* child who rehuse to use an arm or bear

weight on an extremity may have # 4

Care givers are i ones who note that

is out of i ordinary for i children

Dediatic Trauma Scare weight < 10 kg >20 Kg 10-20 kg normal arway 202 ETT air way <50 no or weak Julse as ma, un respon SBP >90 é good perfusion anake 50-99 4 se central pulse Gonsadusnes singlesclused spenor>1 Cutaneous No Contrision, Elauros MO gm shat stab

* higher inciclence of brown injunies beauty if larger site of head. * skeleton is incompletely Callibeds of not common (# = severe trauma) but sit tissue injuries may occur (é out #) as pulmonary contrision & out # rib. ETT Foleyss new born 5 F, feeding 25 - 30-6 m 5-8 feeling 3-3-5 6-12m 3-5-4 8 F. 1-34 4-4.5 lof' 41-7y 5-5.8 10 - 12f 8-104 5-5-6-5 12/ obstruction of airway, so I inch thick byour of padding beneath i infant's torso (0-34)

aill preserve neutral alignment of spinal * appropriate position of iETT. tubesizell

unconscions for fear of vomiting & aspiration * i arrway is inserted directhy (downwards) to word injuryed bleeding from soft palate, tongue depressor may be used. * Cricoid ring is narrows making scal around an unculled ETT, so it was previously preferred for tear of necrosis due to cufff Culted tube (now these antied tubes is used in designs w avoid this side ether * stylet tip shouldnot extend beyond, end of itube. * drug assisted introdution or rapid sequence intubation: 1- pre skygenton 2- atropine: 0.01-0.03 mg/kg 1-2 mm before ETI in intents (max. 0.5mg) to: - avoid broody cardia (as in lants has more pronounced vagal response to ETT than children adult:) - dry secretion permitting easier visualization

3- midazolam: 0.3 mg/kg in normovolemia infants de of my/kg in children Edypulen santidate: Fluma Venil 4. temporary chemical paralysis by a short noting deplarizing neuro muscular blocking agent is succerytoholine: 2 mg/kg in children < loky * avoid mostrachent intubation * position: 2-3 cm below i vocal Gords * because of short tracken, displacement of ET extubation or Rt boon chas interpretion may occur à head movement à manifoulation, so tregue examination for position is recommended. * Don't be DOPE equipment failure (s); displacement of DOPE and principle conflictions. obstruction & pneumathorax * LMA: £ 6.5 kg 10-20 kg - 2 5-10 Kg -- 1-5 3-7014-3 20-30 kg - 2.5 * adult bagdmask ___ burstrauma * hypoxia is i most common course of arrest in children

* respiratory acidosis (due to hyperentitation) is; most common acid-base disturbance during resus *>30% of blood is lost before SBP 11 * 11 HK & II skin perfusion are i only keys to early D. I hypovolemia * later signs for hypowlemia; weak pulse; narrow pulse pressure (220), skin notthing, Cool extremities, Il conscions ne s & 160074 II BP (very Lite) * SBP for child = 90+ (2x age in years) i Lower Limit of SBP = 70 + 11 dBP = = XSBP * 11 13P = >45% blood 6085 - LIHRELL BP , rapid in his on of crystalloids * weight = (2x age) +10 * blood volume in intends: 80 ml/kg " children; To ml/kg * 20 ml Ilio wirmed crystallord experiphend line is preferred, them intra-osseous (in uninjured limb, distil hemore titien) Then temoral catheter

* Hund boluses: 3 (20 ml/leg boluses) then packed RBCs as I am / kg of the blood components * adequate resuscitation: -slowing of HR (<130) - return of pulse return of normalsky -- 11 warmth of extremities - 1958P - 17 pulse pressure - 17 UOP (1-2 ml/kg) * response to resuscitation: Diresponders: to crystalloid for blood D transient responders: improvement then deterioration 3) non responders: no response * UOP: infants: 2 ml/kg/h younger children. 1.5 ml/kg/h children 1 m/kg/h rolute , 0.5 ml/kg/h * CPR>15 min. or fixed pupils on arrival no Survival injury in children is tension pneumothors * Cal in children has arisk (1:1000) for

* FAST is not relied upon of his modest sensitivity in children * blood (by fAST or C.T) + unstability = Ahids Ablood -sit novesponse-Laparotomy as mostly hear, spleen f Kidney injuries are self 4 mited * injuries to i physis - growth retordation - Immeture lane in children greenstick # w we incomplete & angulation maintained by cortical splinters on i concave surface * supture of a hollow viscus requires entry operative intervention * outcome in children who suffer severe brain injury is better than in adults but age 23y is worse than there bb cerebral perfusion, seizures or hyperthermin 15 Common * hypotension from hypovolemia is i worst

Single nsk factor for 2my brain injury

* IVH, EDHASubgled hase rirely combe

hypotension-due to opened situres

* bulging tontanelles or sutures dinstases should bett as having amore severe injungy this may be asign of 11 ICT x impact seizures (shorthy after injury) are Common & usually self limited. * phenyton: 15-20 mg/kg as 0-5-1-5 ml/kg then 4-7 mg/kg ld for maintenance * hypertinic saline (31.): 3-5 ml Kg * mannitol . U-5-19 /kg (rarely required) * verbal modification in GCS for < 4y: - appropriate words socials mile or fixes at ollows - 6 - cries & - persistently irritable (3) - restless dagitated 2 - none * Spinal Gord injuries are uncommon in children * injuries (spinal) 91 at i Level of occipant to as * pseudo sublixation is commond to differential then repent x-ray, it subligation persist * physis = growth plate

x if spiral cord injury is suspected based on HX & neurological examination, X-ray doesn't exclude injury, so maintain immobilization f Consult * blood boss & # pelvishlong bone is less in children * islated # termer & shock search for other canse (# temur II HCT 41.50 it doesn't Carre shock) (Geriatric) * minor mechanism of mjung Can sochice lethal injury due to II physical reserved Comor bidity * Shock, il ConsiousnessAchest well injury > ord early intubation * i maximum HR = 220 - age (after 40 yold) * severly injured elderly & hypotonsion of metablic aciclosis has poon prognosis sespicially if there is brown injury * elderly may be hypsiolemic é normal BPAHR

* minor pelvic or hip # can course retroperion hemorrhage * brain mass It 10% it iage of 70 yf replaced by CSF & idura become tight of adherent to iskull increasing ispace costulle branso, deins ditate of speed é monos trauma of significant amount of blood accumulates before symptoms. * incidence of SDH TTE age & may Carry + drug history for drug - drug interaction (Pregnanty) * at 20 w _s at i umbitions * at 34-36 w_, at i costal margin * bowel is protected from blunt traum to upper abdomen while it is susception to penetrating trauma to upper abdomen * therest to elus is allected by blunt trauma while works absorb peneticiting injung Cousing less injung (in last trimestil)

* plasma volume IT gradually in pregnancy e less 11 in Hb causing II in Hct & physiological anemia of pregnancy * mild 19 in clotting factors * Hct: 32-42% *WBC: 5000 - 12000 * PH: 7.4-7.45 + HCo3: 17-22 * PCo2: 25-30 * abdomind enlargement It chest expinsion 77 R.R _, 11602 ___ 61 H603 * in supine position suterus compress IVC, IIVOR __ , W Cop by 30 % * HR. - 11 10-15 6pm * PCO2 1 35- 40 may eguel impending Placents) respiratory failure * ECG may show - It axis deviation - ectopic bents - Flat or inverted I in Il falf & pencing * gastric emptying is delayed so decompression is important to avoid aspiration * symphysis pubis widons to 4-8 mm & sacro-iliac * symphysis pubis widons to 4-8 mm & sacro-iliac joint space 11 by it 7th month

* blust trauma e pelvic # Can Canse massing retroperitoreal hae because of enlarged pelvic very * i werns should be displaced mannualy to it to relieve pressure on i IVC&it immobilization in asapine position is required, i board can be log rolled 15 to i left. * because of II intravascular volume, premont , atients can lise asignificant amount of bleo. before MAR or LIBP occur, So itoetus may be in distresse i placenta is deprived of perfusion while i mother's conditions appear stable * crystalloided or blood are required to maintain physiologic hypervolemia of pregnancy * vassopressors - i last resort as they be whenhe * i main Cause of fretal death is maternal shock of death * i 2nd couse of footal death is placental about * abruptio placentae. - vaginal bleeding (70%) & uterine tendemess - uterine tetany - o frequent uterine contractions

* in Late pregnancy, abruptio may occur & minor trauma so: - vaginal examination is important (for blacking) obstetric consultation is important xit no nisk factors for toetal loss - 6h montoning * risk for foetal loss or abruption _ 24h monisoning * risk factors are: -> maternal HR > 110 - injury severity scre >9 -> placental abouttion , Foetal HR > 160 08 < 120 - ejection during RTA or MCA * foetal heart sound (toned rate) is sensitive indicator of both maternal blood volume statust toetal well being * X-ray should be done when inclicated * blunt trauma may cause amniotic fluid emblism or * trequent viginal examinations should be worded * all pregnant Rh + ve trauma partients should recieve Rh. Ig therapy unless i injury is remote from i werus en limb trauma, as o of he repatients Rh + re blood will sensitize to 1. o Rh-repatients * perimortion C.S is not recommended; not trauma as ifoetus almost will die before mother death

* Anti- H. Pylori Ab.

* for H. pylori:

i 1st week: ompprazole rong twice Id +

Amoxicilla A clavalanize taice Id.

then in i 2nd week: omeprazole rong tuice Id.

+ clanthrongen 500ng tuice Id Celving

+ metronidazole 500 ng 18h.

Thermal injuries,

* Suspect mhalation i njung & Consider, need

for ETT in.

1- face for neck burn

2- Carrbon deposites in i mouthfor nose of

Carbonareous sputum

3- inflammation (acute) tenythema in i

oropharmy.

4-hourseness of voice

5_ HbCo>10/ in apatient who was in live 8- Cir Cum ferential burns of i neck * remove clothes (do not peel off adherent clothes) * chemical powders should be brushed from x copions amount of warm tap water x > 20/ Surface area , fluid resiscitation * peripheral line (if no healthy tissues * line in upper extremities is overthat in lower extremities, as in lowerones AT risk of phile bitis & septic phile bitis

* Ringer's Lactale is preferred

* i palmar surface + bingers of is patient's

hand = 1/ of patient's body surface area

* 2nd degree burn or partial thickness burn me hypersensitive to parsy even to are current * 3rd degree burn; black skin or red but not blanch & pressure __ pain less

* Surface area: facefreck - 9% back of abdomen 9 chest ... 9 x apperlimb (APP) 3% abdomen 3/ upper limb(Alp) 39/ back of chest -9%. lower limb (ant.) -9% · Lower limb (post) - 9/. 11 of (ant) - 9% * in children. front of head ___ 30/ back of head ... 9.1 each & Eimb _ 71 i perinium is é i abdomen * suspect co poisoning in patients burne in enclosed area => Hx + ~ < 201/2 - smo symptoms HbCo 1 >27/ , headache, rawla, Con husion & death * Cherry red skin is raref premortal. * half the of Co 15 4h on breathing room and 40 min. on 100% 02 * Paco of 1 mmly = Hbco of 40%

* Plus resuscitation: 2-4 ml/kg/surface area of 2nd 43rd degree burn rext 16 h. , to maintain up at 0.5 ml/kg/h for adults & I ml /kg /h in children * in very small ohildren (Klokg), add ghose to avoid hypogly cemia * in persistent acidemia, consider Gamide poisoning * nausea, vomiting, distension or surface area > 20%. Ryle to avoid aspration * word hypothermial Cold water * don't break blisters it not intected before 7-lod to allow underlying epothelialization (in biologic sterite wordstray) * remove any applied medication before applying appropriate antibacterral * no marcation for antibiolics except for in lectron of chemical burn is due to acids, alkalis severe+penetrating) + petrolium products

- remove i chemical by brishing or Lhigh large amounts of water for 20-30 min - no need for new ralizing agents (react = many products & may produce heat) - alkali burns to i eye - 8h Continous irrigation * criteria to transfer to burn contar. 1-2nd or 3rd degree >/o/ or involving face, eyes, ears, hands, teet, gonetale, perineum or skin over major joints 2-3rd degree 3 - Significant electrical or chemical burns 4- Inhalation injury

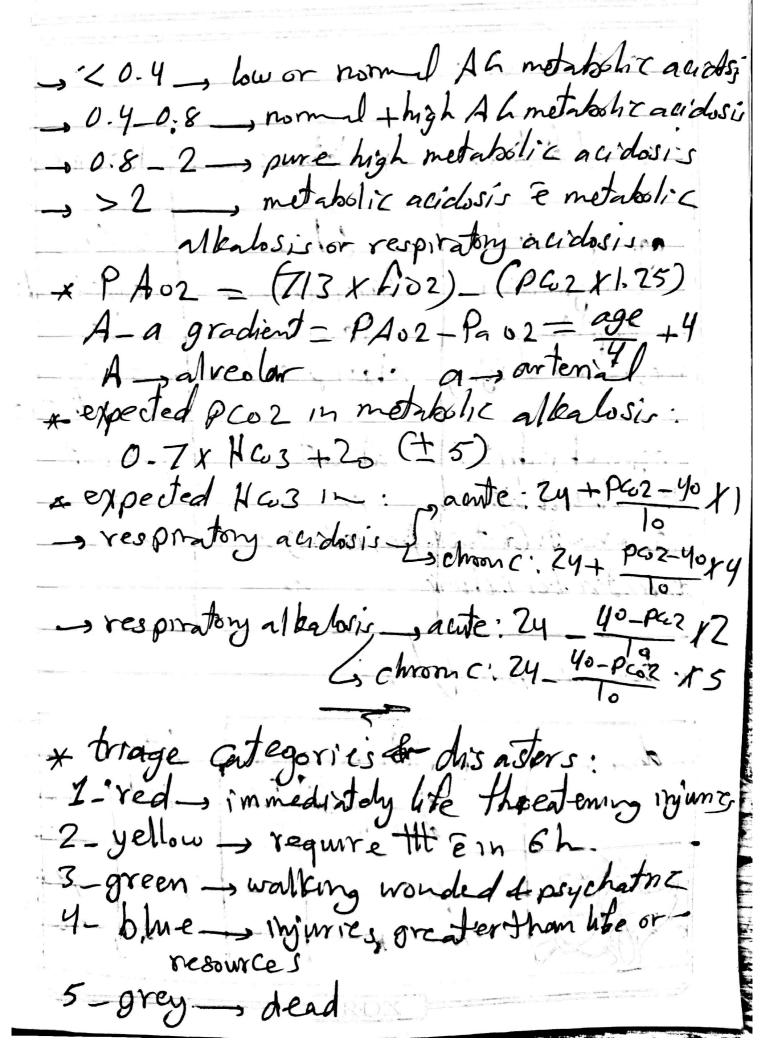
* Cold injuries: The frost mp: - parngpallors numbres - reversible & rewarming 21 Frost bite. - o Cause: freezing of tissue & intracellular ice crystal formation, micro vascular occlus tissue arioxia + reperfusion injuny

s 1st degree: hyperemiasedema. - 2rd degree: hyperemia, edema, clear veside formation & partial thickness skin necro sussi 3rd degree: hemorrhagic vesicles full thickness sc tissue nerosis - 4th degree: 3rd + ms, borned gangrone
i affected part is initially hard, cold,
white 4 mimb. [3] non freezing injury: - cause: long term exposure to wet conditions temp-just above freezing (1.5-10°C)micro vascular endothelial damage 4 vascular occlusion (handsof foots of soldiers, Sailorsf tishermen) - i entire foot can appear black but i deep tissues destruction may not be present - hyperemia, pain, dus thesia, edema, blistering, redness, ecchymasis, & waration * Ht of coldinjuries:

- rewarming, except if there is riskol
refreezing - remove cold do thes & blankets ---

- worm hurds per mouth

- warm water over i affected part till reporting occur. - analgesics of sedationes as rewarming is pam ful: - wound Care * size of pediatric Central line; 5,7e 0-0.5 y 3 F 3-4F 3-6 y 4-5 7-12 y 4-5 &5-8 - i to larger SITE 15 for ferneral -, insertion distance. initial length of incertion (cm) = 1.7+ (0-07x height in Cm) * normal anvor gap; 12 ± 4 * ladate: <2 mil * gap gap: AAG = AG-12 AHC03 - 24-HC03



x tetanns:			
wound features non tetanns prone tetams pon			
age of wound 6h. >6h Configuration hnear fabrasion stelltefamilia			
depth lem > lem > lem missile, crush,			
signs of infection absent present			
Contaminants (dirts sol feces Estim) 11			
derensted for 13 chamic			
tetaning posphylaxis.			
doses non tetanns prone tetamis prone tetamis toxoide Igh . Ted I Igh			
23 doses no * no yes no			
Tho xy			

o booter dose of DT it >104. Sme lat dose m my tetames poone wond & >5 y m tetamis prone ones separate syringes & separate sites.

separate syringes & separate sites.

if i patient has over received aseries of 3 rijections of toxord, I girs not indicaded, unters i wound is tetanus proned > 24 hold * Framingham oriferrator D. I heart bailure: pnD critera. gallop! · hepitojugular rolly - TOVP; distanded neck V. · Cardio megaly in OR · crackles in lung helds · a cut e pulmonary edema. 5 d in response to · weight loss > 4.5 kg in the of heart failure - minor criteria: boilateral ankle edema pleural effusion · HR >120 - noctumal lough · dysprea on orderary activity
· hepatomegally . It is that a presty by one thind.

x 02 delivery:			
device-	flow rate (L/mm)	F105.1	
nasal Cannula: 1-6 L/m.	2	257	
25% + 4% for	3	387	
each 1LM.	5	45%	
Simple face mask		35%	
35% 4 6% for each 11 17	9.	47L.	
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6.50	60%	
ex to 602 02 -	sone Maps somed,	80 -85%	
entrand of roomand of expland G2	son Maps in place,	952-1001	

241 Varturi mask blue (verti-mask) 28/ white for previse thaton 31/ orange .1702 35 / yellow: 4-8 L/m. 40/ red 601. green * Geo potak 600 tab * Nimodipine (Nimotop). · CCB acts marry on cerebral BV ster 5 AH (spontaneous) . minmal effect on mys Conduction Conduction - 60 mg Po 14h for 21d (30 mondo) 5) SA node in i Rt atrium beside Fentry of SVC *- AV node _s at i lower part of interatrial system _s bundle of Hiss _, R+4 L+ BB-, Purkinje tibers * electromechanical coupling. > impulse -> Contraction